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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,734	08/10/2001	Kazuo Okunishi	204552021000	4815

25227 7590 03/23/2006

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EXAMINER	
QIN, YIXING	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/925,734	OKUNISHI ET AL.	
	Examiner	Art Unit	
	Yixing Qin	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In response to applicant's amendment received 12/20/05, all requested changes have been entered.

Response to Arguments

Applicant's arguments filed 12/20/05 have been fully considered but they are not persuasive. The first argument is that both the first and second embodiments of Ueno shows that the data in area 21A is used to control a printer. While it is true that there is a print prohibition in the first embodiment, it is not true in the second embodiment. On column 6, line 63 of Ueno, it says that the data area 21A is to be used as reference data, which can mean that is it used simply as information. Indeed, in the following paragraph, in column 6, lines 65-67 and column 7, lines 1-4, Ueno discloses that only an alarm is displayed, but the controller 6 still permits a print operation of a printer. It would be obvious that the warning of having an incorrect checksum is simply used as information for the user (through the alarm display) and does not actually control (or prohibit) printing. Since the second embodiment can still read on the claims as presented, the Examiner is maintaining his rejection.

In regards to the arguments made against claim 8, the Examiner asserted that area 21 of the memory 5 contained information that would not be used for printer control, such as a manufacturing date. Although area 25 does contain such information, the Examiner never cited that area to read on the first unused address. Thus, the rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 18 and 20 fail to correspond in scope with what applicant has described in the application. The applicant has stated in Fig. 23 and P[0099] that the determining process is based upon whether the data at address 15 is 128 (S42). This statement indicates that the invention is different from what is defined in the claim(s) because the claims call for an original version information and an updated version information to be contained in the process cartridge. As describe in P[0099], the number 128 is the only number that determines whether a cartridge is a older or newer version. There are not two version information values, an original and an updated version in the process cartridge.

Claims 16 and 17 recites the limitation "the at last one reference." There is insufficient antecedent basis for this limitation in the claim. The Examiner has interpreted these two claims to mean that the process cartridge in claims 1 and 8 contain a reference value that is a voltage value.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) and in view of Ueno (U.S. Patent No. 6,144,812).

1. **Claim 1**

- Miyamoto et al discloses in column 1, lines 12-17, that "[i]n an image forming apparatus such as a copying apparatus, it has been considered to attach a memory on an interchangeable process unit such as a drum unit and to judge the service life thereof from the content stored in the memory, such as the number of copies."
- Miyamoto et al discloses in Fig. 3 data stored in non-volatile memory. One can see on the table on lines 55-60 of column 3, that there are various items stored in the addresses.
- Furthermore, in Fig. 7, one can see that there is a check against the serial no. stored in the memory. A failure to match a msb of 0 leads to copy inhibition.
- Also, in column 3, lines 62-65, Miyamoto et al discloses that "[t]he process conditions 1 and 2 are used for varying the high voltage condition at the image formation, according to the fluctuation in the sensitivity of the photosensitive drum 12 in the process cartridge 39." Either description of the use of the serial number of the process conditions the information can read on "**first destination information to be used to control an printing operation...**").
- The Miyamoto reference, however, does not explicitly disclose a **second destination information** that is not used in controlling printing. However, the secondary reference, Ueno, discloses in Fig. 2 item 21 various items stored in an EEPROM in a cartridge 5. It would be obvious that such information as, for example, manufacturing date would not be used in controlling a printing operation. Both references are in the art of using process cartridges to enhance the capabilities of a printer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included some

information that is not used in controlling the printer into the process cartridge. The motivation would be to use such information for identification purposes.

2. **Claim 8**

- Miyamoto et al discloses in column 1, lines 12-17, that "[i]n an image forming apparatus such as a copying apparatus, it has been considered to attach a memory on an interchangeable process unit such as a drum unit and to judge the service life thereof from the content stored in the memory, such as the number of copies."
- Miyamoto however, does not show the **first unused address** in which a value is stored and the use of which is not defined. However, again from claim 1 above, Ueno discloses in Fig. 2, item 21 that, for example, a manufacturing date, would not have any control usage. Although there is no "value" as shown in Fig. 2 of Ueno, one knows that in order to store information in memory, it would be in the form of bits or hexadecimal values as shown in Miyamoto.
- Miyamoto et al also discloses in column 3, line 53 that a non-volatile memory is used. In the table in the same column, there is a counter there are vacant addresses 5-63 and the value is current assigned to FFFFH. None of the addresses 5-63 are used as shown in the particular table in column 3 (i.e. any could be the "**second unused address**").
- Both references are in the art of using process cartridges to enhance the capabilities of a printer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combined the memory areas of both Miyamoto and Ueno for the storage of information. The motivation would be to use such information for identification purposes or have an unused area as working space.

3. **Claims 16 and 17**

- Again, Miyamoto does not explicitly disclose the storage of a voltage value in a process cartridge. Ueno, discloses in Fig. 2, item 23 that there is a default primary high-voltage bias setting value. Both references are in the art of using process cartridges to enhance the capabilities of a printer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to store information regarding a voltage value. The motivation would be to use the voltage value for information regarding a process cartridge.

4. **Claim 19**

- Again, Miyamoto shows in Fig. 3 and Ueno shows in Fig. 2 different memory arrangements. One can see that in Fig. 3 of Miyamoto, there is plenty of vacant memory slots for storing information from Fig. 2 of Ueno if the two references were to be combined. However, it would be obvious for one of ordinary skill to choose one manner over the other in order to, for example, save space by storing everything sequentially without any address gaps, or allow extra memory

addresses for saving variables or other pertinent data. The motivation would be to let the memory arrangement be customizable.

II. Claims 2-7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in view of Ueno (U.S. Patent No. 6,144,812) and further in view of Hirst et al (U.S. Patent No. 5,930,553)

5. Claim 2

- The Miyamoto et al and Ueno references does disclose various information in the memory, but does not specifically disclose that the second destination could contain a lot number of the process cartridge that is not used in print control.
- The tertiary reference, Hirst et al discloses in Fig. 2 and column 3, lines 60-62 that Fig. 2 is "...one possible consumable memory segmentation scheme..." Hirst et al defines "consumables" in column 1, line 17 as "...toner, ink, ribbon, photoconductor, developer, etc..."
- One can see from item 19a, that there is various data to identify the cartridge. One would understand that a lot number is basically used to identify an item.
- All references are in the art of using memory to enhance the performance of image forming parts in a printer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included data for the purpose of identifying a particular cartridge in the cartridge's memory. The motivation would be to ensure that a particular cartridge is fit for a particular printer.

6. Claim 3

- The Miyamoto et al reference discloses in Fig. 2 and column 3, line 45 "...an operation unit 103 for setting the copy mode." Also, it discloses in the table on column 3, that the data could be in hexadecimal form (i.e. "**displayable format**"). It does not, however, explicitly disclose the displaying of information on a display unit. Ueno does not go into detail about the displaying of the second destination information.
- The tertiary reference, Hirst et al discloses in column 1, lines 21-24 that "...near the end of the consumable's life, the print engine displays a message to the user on the front panel of the device or a host device..." One would understand that this front panel could be the operational unit as mentioned by Miyamoto et al and that a variety of information could be displayed – it is just a matter of design to display information from the memory instead of just a message. It is also well-known that operation units can have a display (such as a small LCD).

- All references are in the art of using memory to enhance the performance of image forming parts in a printer. The storage of information in hex and the displaying of the information on a display are also well known in the art, and it would have been obvious to one of ordinary skill in the art at the time of the invention to have a display unit to display information in the memory. The motivation would be to give users crucial information regarding the performance of the components in the printer.

7. **Claim 4**
   - The Miyamoto reference discloses in column 4, line 21 that the memory used is non-volatile.

8. **Claim 5**
   - Again, the Miyamoto and Ueno references do not explicitly disclose a lot number not used for print control. However, Hirst et al disclosed in Fig. 2 – item 19a – that there are three items stored to help identify the printing component. These together can make a lot number and the second destination information could be either of the three items in the box 19a. It would simply be a matter of design to assign a certain amount of information to a destination or lot number.
   - All references are in the art of using memory to enhance the performance of image forming parts in a printer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have stored the lot number in a particular address in the memory areas of Miyamoto and Ueno. The motivation would be to simplify the task of identification when not all data is needed in order to identify a particular component.

9. **Claim 6**
   - Miyamoto discloses in the table on column 3, that the data could be in hexadecimal form. Since ASCII is also a well known standard in storing information, it would have been obvious to one skilled in the art to use ASCII instead of hexadecimal.

10. **Claim 7**
    - Again, as mentioned above, both ASCII and hexadecimal notation are well known, and would be obvious to use standardized notations in information storage.

11. **Claim 9**
    - Miyamoto et al discloses in column 4, lines 17-21 that "[a]s the photosensitive drum 12 in the process cartridge 39 shows fluctuation in sensitivity, the correction value for the sensitivity is measured for each process cartridge 39, and the measured correction value is stored as the process conditions 1 and 2 in the non-volatile memory 104. " The contents of the memory are shown in the table in column 4. It would be a matter of design to store the median value in a given

memory address since any value of the range of values could be stored. There are also many addresses where the information could be stored.

12. Claim 10

- The Miyamoto et al reference discloses in the table in column 3, that there is a serial number in addresses 0-1. Hirst et al, discloses in Fig. 2 (item 19a) identification information. Since version numbers are well known, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a version number as a part of the serial or identification number.

13. Claim 11

- The Miyamoto et al reference discloses in the tables in columns 3 and 4 that the needed information (i.e. information that is accessed more) is in the lower addresses of the memory and that free memory addresses take up the rest of the memory (i.e. the upper addresses).
- Furthermore, Miyamoto et al discloses in Fig. 5A and column 4, lines 40-45 that "a dummy code indicating the read-out mode [is] followed immediately by an address (A0-A5) to be read." A5 is a part of the vacant addresses (5-63) and one would understand that frequently accessed information would be stored in A5 since storing it in higher address would cause more clock cycles in order to access since it appears in Fig. 5A that the addresses are accessed from highest to lowest.

III. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in view of Ueno (U.S. Patent No. 6,144,812) in view of Hirst et al (U.S. Patent No. 5,930,553) and further in view of the applicant's submitted prior art.

14. Claim 12

- Miyamoto et al discloses in column 1, lines 12-17, that "[i]n an image forming apparatus such as a copying apparatus, it has been considered to attach a memory on an interchangeable process unit such as a drum unit and to judge the service life thereof from the content stored in the memory, such as the number of copies."

- Although the Miyamoto reference does disclose the storage of information in the memory, they do not explicitly disclose the storage of shipment information. However, the applicant's submitted prior art in the background of the specification stats in page 1, lines 25-27 and page 2, line 1 that non-volatile memory stores information about the shipment destination.
- The Hirst reference discloses a lot number equivalent as stated in the rejection to claim 2. And from claim 1 above, the Ueno reference disclosed in Fig. 2 item 21, some information that would not be used in the control of the printing operation. The lot number would be an obvious item to include in item 21 of Fig 2 of Ueno since the lot number is used for identification purposes.
- Since all the references are in the art of image processing and using memory for the storage of data in regards to an image formation section, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a nonvolatile memory showing destination information and a lot number. The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

15. Claim 13

- The first three references do not disclose the use of the lot number to show that it is a value pack. However, the applicant discloses in the submitted prior art in page 2, lines 13-19 of the specification the comparison of a standard and a value pack. Therefore, it would be obvious to include in the lot number that a cartridge is a value pack in the memory information of the combined invention of the first three references. The motivation would be to help identify items that are the same, but come in different packaging and quantities.

16. Claim 14

- Although the references do not mention that there is a certain code for a recycled product to be placed into a lot number, they do disclose that you can store various identification information into the lot number. Since recycled products are well known, it would be obvious to one of ordinary skill in the art at the time of the invention to include information that a cartridge contains recycled parts.
- The motivation would be to provides further identification of a product.

17. Claim 15

- Although a version number is not explicitly disclosed, the information in item 21 of Fig. 2 of Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the

information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory).

- All the references are in the art of image processing and using memory for the storage of data in regards to an image formation section, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains version information. The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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